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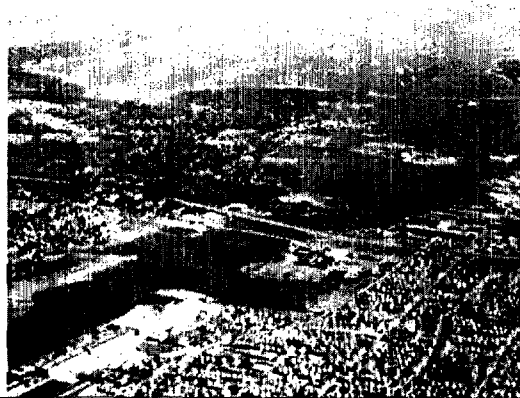
New Bedford Harbor Superfund Site
Fish Smart Campaign



Stacy Greendlinger
US Environmental Protection Agency

New Bedford Harbor

- Encompasses 18,000 acre urban estuary
- Added to NPL in '83
- 900,000 cubic yards PCB-contaminated sediment to be removed



175 Football Fields
Each 3 ft Deep

Contamination Levels: ***How bad is bad?***

- PCB Contamination levels: highest 200,000 parts per million
- Put into perspective: Cleanup Standards
 - 1 ppm residential
 - 10 ppm upper harbor subtidal mud flats
 - 25 ppm intertidal recreational
 - 50 ppm harbor

Human Health Risk:

- Consumption of contaminated seafood
- Dermal contact

Site Challenges

- PCB-contaminated seafood 40 times higher than Superfund risk thresholds
- Unenforceable fishing ban
- Four impacted municipalities
- Fishing is important to the area
- Lengthy cleanup process

- State issued without enforcement measures;
- with a large non-English speaking immigrant population, low literacy levels, and high drop-out and unemployment rates
- culturally, historically and economically-- subsistence fishing is prevalent;
- which likely will take decades because of the large scale (900,000 cubic yards of sediment to be removed) and limited funding rate.

Current \$15mil per year \Rightarrow Excess of 30 yrs.

How to Protect Human Health Now?

- Goal:
 - No consumption of New Bedford Harbor Seafood
- How to achieve?
 - With no enforcement mechanisms it comes down to changing human behavior

30 yrs is a long time to have people @ risk

Changing Human Behavior

1st Get People's Attention

2nd Inform Them

3rd Modify Behavior

Sounds straight forward enough...however...people are bombarded every day throughout the day

Hefty Competition

Behavior Influences

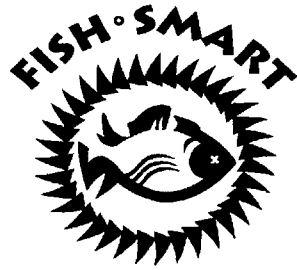
Children

- Influence adults directly with message about their children
- Influence children and their own actions with direct message to them
- Indirectly influence adults by message directed to children which they in turn bring back to adults

For the NBH SF site children are the most effective behavior influence
People less likely to put children at risk
Risk that is acceptable for them isn't for their children

Children motivating factor

Fish Smart Campaign



Designed to raise people's awareness of health risks from eating PCB contaminated seafood

Desired Outcome: change local consumption habits

- Challenges of a voluntary program w/ no enforcement component

○ Strategies and tools the campaign is employing to educate and change local consumption habits, as well as how we are striving to remain dynamic in order to best achieve campaign objectives.

NOT COMMERCIAL

Targeted Audience

- General Fishing Population
- Women of Child-Bearing Age
- Children

▶ Most @ risk

most influence

Most focus from my
limited resources

Fish Smart Tools

- Fishing Map
- No Fishing Signs
- Posters
- Leaflets
- Dr. Tip Cards
- Tri-lingual Brochure
- Teachers' Curriculum Resource Book

What we work with



Materials developed w/ local focus group comprised of social service and health care providers



All materials in English, Spanish & Portuguese

Fish Smart Partners

State Regulators

- Mass DEP and MA DPH

Local Partners:

- Educators
- Environmental groups
- Medical providers
- Social service providers
- Marinas & bait shops



- Addresses limited resources
- Local knowledge/credibility
- Expertise

General Fishing Population

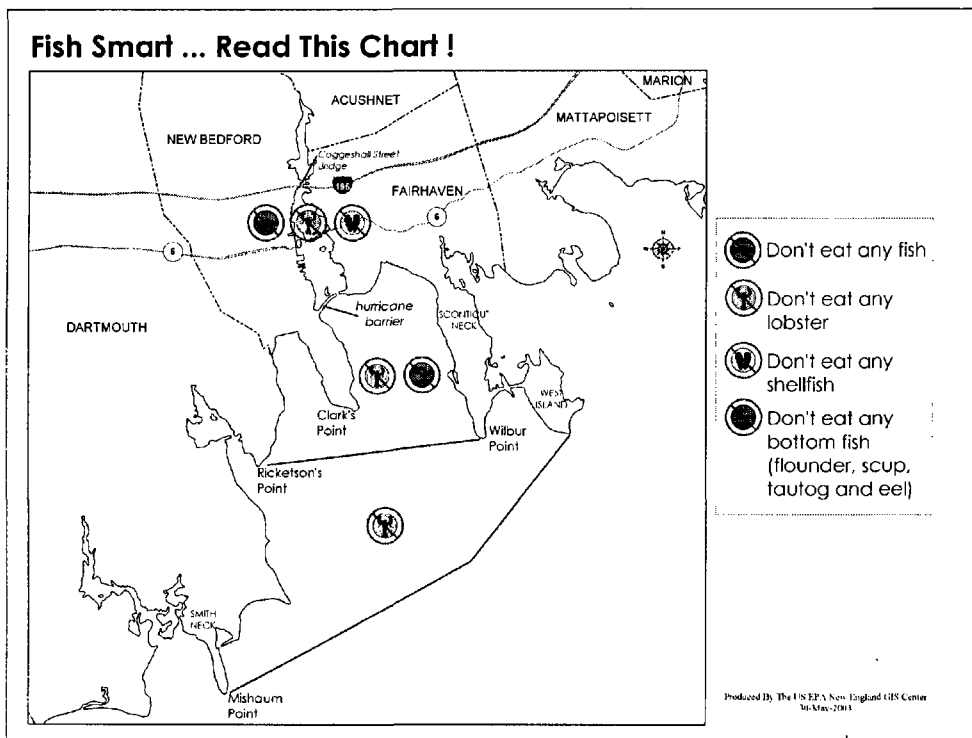
- Mass mailing
- Materials at area marinas & bait shops
- Developing a poster for use at marinas & bait shops
- Materials at Immigrants Assistance Center

STRATEGY

4,000 people on mailing list

Less hope able to change behavior

Typically Male not necessarily
direct child care providers



3 different areas

complicate message

Women of Child-Bearing Age

- WIC Office
- Medical Grand Rounds
 - Local hospital
 - Area health center
 - Area OB-GYNs

WIC = Women, Infant, & Children: program for low income women & children who are at nutritional risk. Provides foods to supplement diets and info for healthy eating

WIC: Posters & Materials for nutrition councilors

Evaluation

Grand Grounds hosted by MA DPH

Continuing Credit hours for medical staff

Presentation in tandem with a physician

Materials

Pre & Post Tests

Evaluation

Materials made available

For Mothers and Mothers-to-Be:



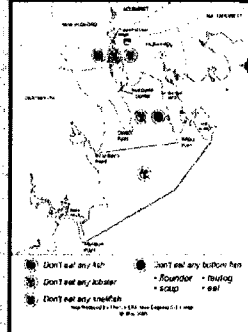
Fish Fact

Most fish are safe to eat, but some are not. Your family is not the only one who can get sick from eating fish. Fish can contain chemicals that can harm you, your baby, or your child.

Tips for Healthy Eating

- ❗ When fishing, DO NOT EAT the fish, shellfish or lobster caught in the areas shown on the map. They have harmful chemicals called PCBs in them.
- ❗ DO NOT FEED it to your young children; the chemicals could harm them.
- ❗ When you buy seafood or if someone gives it to you, ask where it came from.

Fish Smart—Use this Chart



CAUTION:
Do not eat fish, shellfish or lobster caught in the closed areas of New Bedford Harbor:

they have chemicals in them that can harm you, your baby and young children.

If you have any questions about what fish are safe to eat, ask your doctor, nurse, or health care provider. For more information, call the New Bedford Harbor Fish Smart Hotline at 234-234-7341.



SEPA United States Environmental Protection Agency

DEHA



Are your patients at risk from eating fish?

PCB Facts

New Bedford Harbor is heavily contaminated with PCBs.

Eating large amounts of fish or shellfish containing PCBs may cause adverse health effects including: liver and immune system damage; neurological, developmental and reproductive effects; and cancer.

Tips for Patients



Advise pregnant women, those who may become pregnant, nursing mothers and young children not to eat seafood caught from New Bedford Harbor (see closed areas map on reverse).



Advise women of child bearing age that they can safely eat 12 ounces of cooked fish per day from a store or restaurant.

For more information, call the U.S. Environmental Protection Agency at 1-888-372-7341 ext. 81403



United States
Environmental Protection
Agency New England



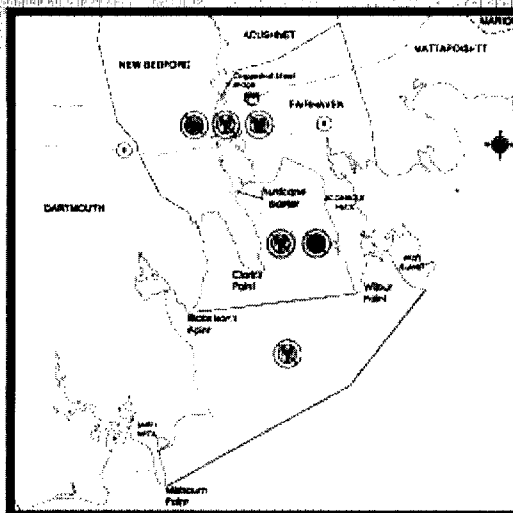


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Figure 2



Medical:

School nurses
WIC
Grand Rounds

Children

Two Day Teachers' Training

- Course included: field work, presentations, resource fair, tour of dewatering facility



In addition to medical outreach angles

Training:

Desired Outcome: Fish Smart info incorporated into curriculum

Provide 12 professional development credit hours for course: additional 2 hrs for Call Back

Evaluation

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Teachers' Training



- Call Back Session:
 - Required prepared lesson plans
 - Teachers in small groups developed biomagnification lesson plans

Children

- Educational Opportunities through:
 - SeaLab, New Bedford Whaling Museum, UMASS at Dartmouth, Lloyd Center for the Environment
- Research Vessel: 5 wk course.
 - Will train the trainers

Partners each have own courses / activities which present teaching opportunities

SeaLab each yr has 2,000 5th graders, 500 teachers and 100 administrators circulate through

Other Opportunities

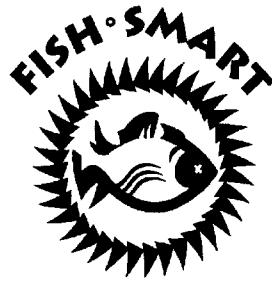
- To-Do:

- Bus Station/buses: posters
- Public Housing: posters
- Community centers citywide: posters
- Public Service Announcements all media
- Permanent display at SeaLab
- Engage new partners

Dynamic
Evolving

MA Executive Office of Environmental Affairs Environmental Justice Coordinator

New Bedford Harbor Superfund Site



www.epa.gov/ne/nbh/